

SERIAL NO. 10/065,743  
ATTORNEY DOCKET NO. 201-1378

REMARKS

Claims 2-5, 7-11, 13-16, 18-23 and 29-36 are pending in the present application. Claims 2, 5, 7, 8, 10, 11, 13, 16, 19 and 21-23 are amended. Claims 6, 12 and 17 are canceled, as are claims 1 and 24-28, which were previously canceled. Claims 30-36 are new. No new subject matter is introduced by way of the new and amended claims.

*Claim Rejections Under 35 U.S.C. § 102(e)*

Claims 2, 3, 5, 6, 8-11, 13, 14, 16, 17 and 19-23 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,497,441 to Mahmood et. al. Assuming the Mahmood et. al reference is valid prior art under § 102(e), applicants respectfully submit that rejected claims are neither anticipated nor rendered obvious by the Mahmood et. al. reference.

The present invention, as recited in new claim 32, relates to an assembly for housing an electrical energy storage device of a vehicle electrical system. The assembly includes a support structure disposed within the vehicle's passenger compartment for supporting the electrical energy storage device, a combined housing/console structure for concealing, at least partially, the support structure and the electrical energy storage device, and a housing cover removably attached to the combined housing/support structure for allowing access to the electrical energy storage device without detachment or disengagement of the support structure from the vehicle.

The housing cover further includes at least one console feature such as a cup holder or storage compartment, and may

SERIAL NO. 10/065,743  
ATTORNEY DOCKET NO. 201-1378

include one or more openings for venting heat generated by the electrical energy storage device. The electrical energy storage device, for example, can be a high voltage battery, ultracapacitor or fuel cell.

Advantageously, the housing assembly allows for the efficient packaging of electrical energy storage devices in hybrid electric, fuel cell or other electrically-powered vehicles. The claimed invention allows for retention of vehicle features, such as a third row seating, auxiliary air conditioning, larger cargo space and underbody spare tire storage, that would otherwise be sacrificed due to the packaging of a electrical energy storage, such as a high voltage battery pack, elsewhere on the vehicle.

In addition, the housing cover allows for easy access to the electrical energy storage device without requiring removal or disengagement of the support structure of the console:

As such the housing cover 28, which is preferably designed to be removable and interchangeable with other similar covers, can be removably attached for ease of accessing and servicing the battery units. Removal of the housing cover 28 provides access to hidden service panel to service the battery, if needed.

(Specification at ¶ 0026.) In addition, removal of the housing cover can provide direct access where the top side of the combined housing/support structure is not enclosed. (See Specification at ¶ 0023.) Preferably, the housing cover is arranged and constructed so as to "snap-on" to the combined housing/support structure. (Specification at ¶ 0024.)

Mahmood et al. in contrast disclosure a multi-purpose console having a latching mechanism for allowing the disengagement of the base of the console from the vehicle

SERIAL NO. 10/065,743  
ATTORNEY DOCKET NO. 201-1378

compartment. (U.S. Patent No. 6,497,441 at Abstract; Col. 2/66 - 3/19.) Although a battery may be "incorporated" into the console, the console 10 does not include a cover or lid removably attached to the console housing that provides direct access to the electrical energy storage device as required by the pending claims. Lid 18 and access doors 99 and 112 merely provide access to interior storage compartments, i.e., "console features" of the console, and not to the combined housing/support structure containing the battery. (U.S. Patent No. 6,497,441 at Col. 3/28-31; Col. 5/43-46; Col. 5/66 - Col. 6/3.) Mahmood et al. in fact teach away from the claimed invention by suggesting that the only way to gain access to the battery is by releasing the entire console via the latching mechanisms. (See U.S. Patent No. 6,497,441 at Col. 2/66 - Col. 3/19.)

In addition, it is important to note that the battery incorporated in the Mahmood et al. console is provided in order to power console electrical components, i.e., to power a DVD player, DVD screen, VCR, etc. (U.S. Patent No. 6,497,441 at Col. 6/31-34.) More specifically, the battery is provided to operate the console components when the console (including battery) is removed from the vehicle:

For example, console 210 may be used in temporary excursions away from the vehicle for daily activities and routine tasks such as shopping and/or visiting friends. Alternatively, console 210 may be used for more extended time periods away from the vehicle, such as overnight stays in hotels and/or camping trips.

In order to provide a source of power for the electrical components of console 210 in these applications, a battery supply 360 is incorporated into console 210. In an exemplary embodiment, battery supply 360 is a rechargeable source of power having a connector 362 which, in this case, is compatible to receive a recharging voltage from either a vehicle's electrical system or a standard wall outlet.

SERIAL NO. 10/065,743  
ATTORNEY DOCKET NO. 201-1378

(U.S. Patent No. 6,497,441 at Col. 6/25-44)

By contrast, the electrical energy storage device of the claimed invention is part of a vehicle electrical system, e.g., a conventional low voltage bus (14 volts) or a high voltage bus (42 volts, 150 volts, 300 volts, etc.). (Specification at ¶ 0004; ¶ 0020.) With respect to claim 13, for example, the electrical energy storage device (battery unit) is used at least in part as a source of power to propel the vehicle. Such a battery in a hybrid electric vehicle for example can provide electrical power to a motor or integrated starter/generator, which in turn propels the vehicle.

Further, with respect to amended claims 2 and 13, the ventilation apertures disclosed by Mahmood et al. are provided to ventilate heat generated by the console electrical components, i.e., DVD player, DVD screen and thermoelectric device (cup heater). (U.S. Patent No. 6,497,441 at Col. 6/6-10.) As shown further by Figure 8 of the Mahmood et al. reference, the vent apertures 118 are disposed away from the battery 360 on the opposing side of the console. The vent apertures thus are not used for cooling the battery as required by the amended claims.

Consequently, because there is no teaching or suggestion of a housing cover, electrical energy storage device or ventilation openings as required by the pending claims, applicants respectfully submit that the pending claims are not anticipated or rendered obvious by the Mahmood et al. reference. The pending claims contain elements that are not expressly or inherently described in the Mahmood et al. reference.

SERIAL NO. 10/065,743  
ATTORNEY DOCKET NO. 201-1378

*Claim Rejections Under 35 U.S.C. § 103(b)*

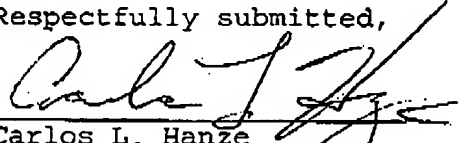
Claims 4, 7, 15 and 18 have been rejected under 35 U.S.C. § 103(a) as being obvious over the Mahmood et al. reference in view of U.S. Patent No. 3,993,378 to Berkus.

While Berkus discloses a battery housing door with vents, U.S. Patent No. 3,993,378 at Col. 2/18-25, the reference fails to teach or suggest the housing cover and electrical energy storage device elements missing from the Mahmood et al. reference. As such, applicants respectfully submit that claims 4, 7, 15 and 18 are allowable over the proposed combination of the Mahmood et al. and Berkus references.

Accordingly, the above-identified application is believed to be in condition for allowance in all respects, and such allowance is courteously solicited. If any further amendment is necessary to advance prosecution and place this case in allowable condition, the Examiner is courteously requested to contact the undersigned by fax or telephone at the number listed below.

Please charge any cost incurred in the filing of this Amendment, along with any other costs, to Deposit Account 06-1510. If there are insufficient funds in this account, please charge the fees to Deposit Account No. 06-1505.

Respectfully submitted,

  
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SERIAL NO. 10/065,743  
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